

REMARKS

The Applicants thank the Examiner for the careful examination of this application and respectfully request the entry of the amendments indicated hereinabove.

Claims 1-20 are pending and rejected. The Title is amended in response to the Specification objection. In response to the drawing objection, Claim 6 has been amended. Lastly, Claim 18 is amended in response to the claim objection.

Independent Claim 1 positively recites an electrostatic discharge protection device having a first bipolar transistor and a second bipolar transistor. These advantageously claimed features are not taught or suggested by the patents granted to Clukey and Vashchenko et al.; either alone or in combination.

Clukey teaches away from the advantageously claimed invention because Clukey teaches that a third transistor is required (column 5 lines 5-10, column 6 lines 60-64, FIGS. 3-6). Therefore, the Applicants advantageously claimed invention is distinct from - and superior to - the device taught by Clukey (i.e. obtains ESD protection with fewer elements than Clukey).

Regarding Claim 9, the Applicants respectfully traverse the assertion in the Office Action (page 4) that Clukey teaches that element 15 is an isolation region. The Applicant submits that element 15 is part of the common collector (column 5 lines 42-45, FIGS. 4-5). In addition, the Applicants submit that Clukey does not teach that either the common collector element 15 or the isolation elements 14/16 and 14'/16' substantially surround the first p-type region and the second p-type region as advantageously claimed (column 5 lines 38-42 and 51-54, FIGS. 4-5).

Vashchenko et al. teaches away from the advantageously claimed invention because Vashchenko et al. teaches the use of a single transistor (column 2 lines 24-26, column 3 lines 13-15, FIG. 2). Therefore, Vashchenko et al. does not teach or suggest a first bipolar transistor and a second bipolar transistor having a common collector as advantageously claimed.

The Applicants respectfully traverse the assertion in the Office Action (pages 9-10) that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Clukey with element 104 of Vashchenko et al. The Applicants submit that a three transistor structure (Clukey) has a very different electrical operation than a single transistor structure (Vashchenko et al.); therefore, it would not be obvious to one of ordinary skill in the art to add a portion of the Vashchenko et al. circuit to the Clukey circuit. Moreover, Clukey teaches away from any combination with Vashchenko et al. because Clukey

states that the single transistor structure, such as Vashchenko et al.'s, is problematic (column 2 line 51 through column 3 line 12).

Regarding Claim 6, the Applicants submit that Vashchenko et al. is limited to diodes in series or parallel (column 3 lines 30-34); therefore Vashchenko et al. does not teach the advantageously claimed two-terminal circuit comprising at least one of a bipolar npn transistor, a bipolar pnp transistor, an NMOS transistor, and a PMOS transistor.

Due to the foregoing reasons, the Applicants respectfully traverse the Examiner's rejection of Claim 1 and respectfully assert that Claim 1 is patentable over Clukey and Vashchenko et al.; either alone or in combination. Furthermore, Claims 2-10 are allowable for depending on allowable independent Claim 1 and, in combination, including limitations not taught or described in the reference of record.

Independent Claim 11 positively recites an electrostatic discharge protection device having a first bipolar transistor and a second bipolar transistor. These advantageously claimed features are not taught or suggested by the patents granted to Clukey and Vashchenko et al.; either alone or in combination.

Clukey teaches away from the advantageously claimed invention because Clukey teaches that a third transistor is required (column 5 lines 5-10, column 6 lines 60-64, FIGS. 3-6). Therefore, the Applicants advantageously claimed invention is distinct from - and superior to - the device taught by Clukey (i.e. obtains ESD protection with fewer elements than Clukey).

Vashchenko et al. teaches away from the advantageously claimed invention because Vashchenko et al. teaches the use of a single transistor (column 2 lines 24-26, column 3 lines 13-15, FIG. 2). Therefore, Vashchenko et al. does not teach or suggest a first bipolar transistor and a second bipolar transistor including a common collector as advantageously claimed.

The Applicants respectfully traverse the assertion in the Office Action (pages 9-10) that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Clukey with element 104 of Vashchenko et al. The Applicants submit that a three transistor structure (Clukey) has a very different electrical operation than a single transistor structure (Vashchenko et al.); therefore, it would not be obvious to one of ordinary skill in the art to add a portion of the Vashchenko et al. circuit to the Clukey circuit. Moreover, Clukey teaches away from any combination with Vashchenko et al. because Clukey states that the single transistor structure, such as Vashchenko et al.'s, is problematic (column 2 line 51 through column 3 line 12).

Due to the foregoing reasons, the Applicants respectfully traverse the Examiner's rejection of Claim 11 and respectfully assert that Claim 11 is patentable over Clukey and Vashchenko et al.; either alone or in combination. Furthermore, Claims 12-17 are allowable for depending on allowable independent Claim 11 and, in combination, including limitations not taught or described in the reference of record.

Independent Claim 18 positively recites an ESD protection device having a first bipolar transistor and a second bipolar transistor. These advantageously claimed features are not taught or suggested by the patent granted to Clukey.

Clukey teaches away from the advantageously claimed invention because Clukey teaches that a third transistor is required (column 5 lines 5-10, column 6 lines 60-64, FIGS. 3-6). Therefore, the Applicants advantageously claimed invention is distinct from - and superior to - the device taught by Clukey (i.e. obtains ESD protection with fewer elements than Clukey).

Therefore, the Applicants respectfully traverse the Examiner's rejection of Claim 18 and respectfully assert that Claim 18 is patentable over Clukey. Furthermore, Claims 19-20 are allowable for depending on allowable

independent Claim 18 and, in combination, including limitations not taught or described in the reference of record.

For the reasons stated above, this application is believed to be in condition for allowance. Reexamination and reconsideration is requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rose Alyssa Keagy", written in a cursive style.

Rose Alyssa Keagy
Attorney for Applicants
Reg. No. 35,095

Texas Instruments Incorporated
PO BOX 655474, M/S 3999
Dallas, TX 75265
972/917-4167
FAX - 972/917-4409/4418